REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of August 31, 2006. Claims 1-20 remain in this application.

Reconsideration of the Application is requested.

The Office Action

Claims 1-5 and 9-20 were rejected under 25 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,748,176 to Gondek in view of U.S. Patent No. 5,142,675 to Oi et al. (hereinafter Oi).

Claims 6-8 were objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-20 remain in this application.

Objection to Claims 6-8.

Applicants are appreciative that the Examiner has stated that claims 6-8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have, therefore, amended claims 6 and 7 to independent form, including all of the limitations of the original base claim and any intervening claims. Applicants submit, therefore, that claims 6 and 7, as amended, are now in condition for allowance. Claim 8 depends from claim 7 and should also be in condition for allowance.

The Claims are Patentably Distinguishable Over the Cited References.

The current Office Action rejects claims 1-5 and 9-20 as being unpatentable over Gondek in view of Oi. Gondek discloses a method of converting data points from an RGB color space into pixels in an output color space. As argued by Applicants in a prior response (Amendment A) to the previous Office Action mailed June 15, 2004, Gondek uses "repetitive subdivision" in order to compute a more accurate result. As also described by Applicants, to reach the final interpolated value, multiple iterations of

computing seven different interpolation equations must be completed. Applicants further argued that Gondek thus does not disclose a mid-point interpolation, but rather a series of iterative interpolations. The current Office Action, even though admitting that Gondek does not specifically teach that the used interpolation is a mid-point, argues that Gondek describes a mid-point interpolation because "center" or average values of eight new data points is provided as the transform result (col. 6, line 64 – col. 7, line 3).

While Gondek does describe a method of interpolation (Abstract), it remains clear that Gondek also describes an iterative interpolation process (Abstract) which is fundamentally different than the mid-point interpolation described by the present application and recited in claim 15, as amended. In particular, by using the repetitive subdivision method, Gondek apparently does not seek to link the number of necessary interpolations to the lattice resolution. The mid-point interpolation described in the present application, with particular reference to page 11, lines 1-16, is not an iterative interpolation but, instead, the number of interpolations are clearly known and limited. For this reason, independent claim 15 has been amended to recite a "non-iterative mid-point interpolation" to distinguish it from the teachings of Gondek.

Further, the present application describes a mid-point interpolation that utilizes only addition and shift operations on the data being interpolated (page 9, lines 14-26). This feature is neither taught nor suggested by the cited references. Further, in the Response to Arguments section of the current Office Action, it is stated that, "If the mid-point interpolation in the claimed invention is different from Gondek, clarification is needed to overcome Gondek's teaching." Although Applicants respectfully disagree with the interpretation set forth in the Response to Arguments section, claim 15 has been further amended to recite a limitation wherein "operations for performing the mid-point interpolation include one or more addition operations and one or more shift operations or division operations." The implementation of the recited mid-point interpolation as described in the present application (page 9, lines 23-26) in a non-iterative manner without the use of multiplication operations yields a time-wise gain over interpolation techniques as described by the cited references.

Applicants respectfully submit, for at least the above-stated reasons, that

independent claim 15, as amended, is not obvious from the cited references and is in condition for allowance.

Independent claims 1 and 9 were rejected in the Office Action of August 31, 2006 for the same rationales set forth for claim 15. With reference to claim 15, as amended, each of independent claims 1 and 9 has been similarly amended and should, likewise, be in condition for allowance.

With reference to claims 2-5 and 12-14, the current Office Action states that Gondek teaches the step of creating the final lookup table as a function of an initial lookup table. Applicants respectfully disagree because the repetitive subdivision process does not produce a new table, but rather only those values necessary for the vertices of the increasingly smaller sub-cubes. Gondek, thus, does not disclose, or otherwise teach, computing a new lookup table. However, by reason of depending respectively from independent claims 1 and 9, currently amended as described above, claims 2-5 and 12-14 should also be in condition for allowance.

Claims 10-11 and 16-20, by reason of depending from independent claims 9 and 15 respectively, also currently amended as described above, should also be in condition for allowance

CONCLUSION

For the reasons detailed above, it is submitted all claims remaining in the application (Claims 1-20) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Mark Svat, at Telephone Number (216) 861-5582.

Respectfully submitted,

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11/30/06
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